

Air Permitting and Regulation Issues for Distributed Energy Resources

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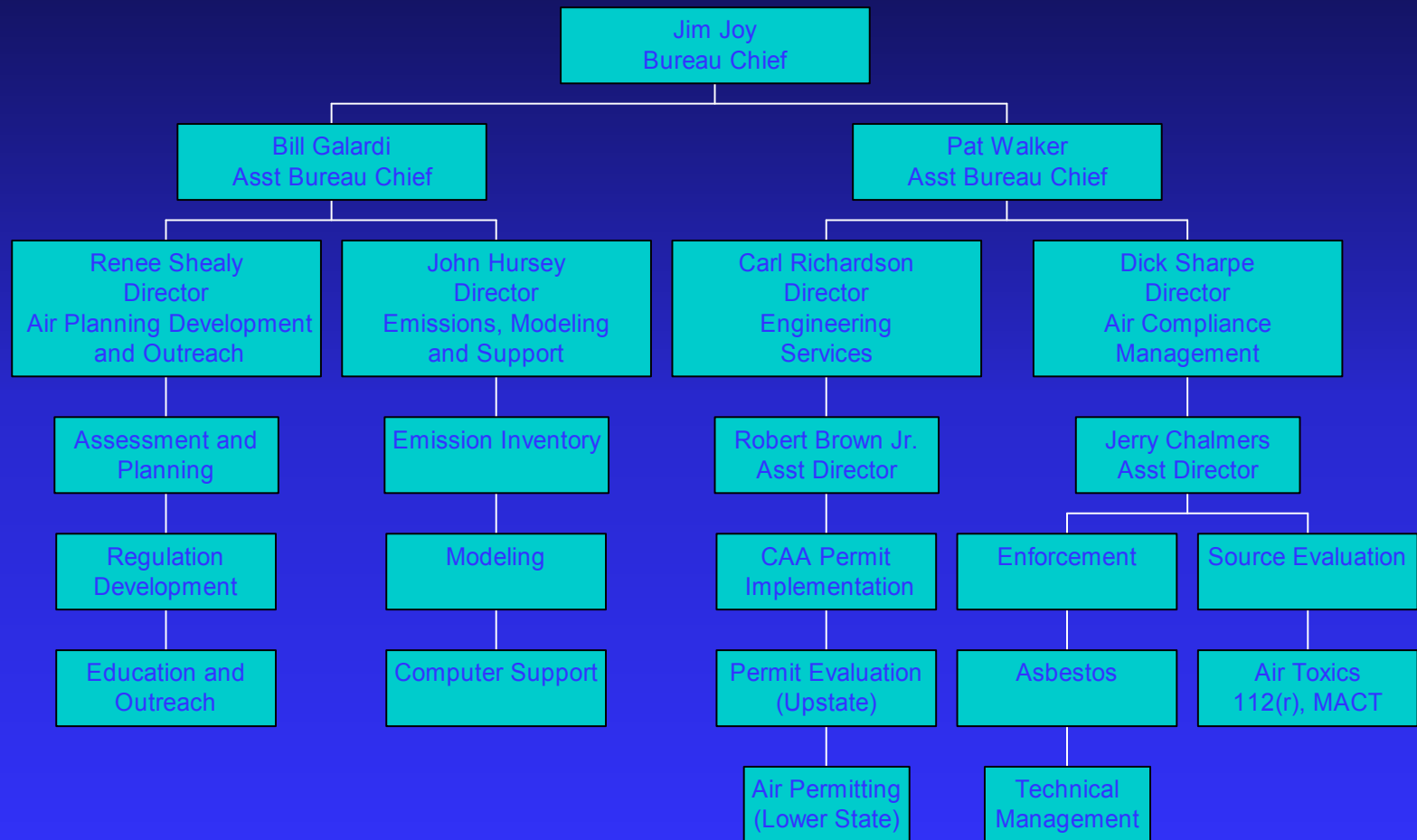
Main Topics

- General Bureau of Air Quality information
- Regulations
- Types of Permits
- Permitting Process
- Permitting Info

Our Mission

"The Mission of the Bureau of Air Quality is to conserve and enhance air resources in a manner that promotes quality of life."

Organization Chart



Other Agency Contacts

■ Small Business Assistance Program

- ◆ Less than 100 employees and not a major source of air pollution (see Title V slide)
- ◆ Technical assistance with air permitting
- ◆ Helps work with other parts of the agency
- ◆ 1-800-819-9001

■ District Offices – 12 separate district offices across the state

Regulations

- Federal Regulations
- State Regulations

Proposed MACT – Subpart ZZZZ

- Applicability: Reciprocating Internal Combustion Engines (RICE)
 - ◆ Facility has a RICE, and
 - ◆ Facility is a major source for Hazardous Air Pollutants (HAPs) as defined in 40CFR63 Subpart A
 - ◆ Major source has the potential to emit ≥ 10 tons/year of a single hazardous air pollutant (HAP) or 25 tons/year of combined HAP's

Proposed MACT – Subpart ZZZZ

- Exemption from all requirements except initial notification:
 - ◆ Emergency power/limited use unit
 - ◆ Burns landfill or digester gas (these may be covered under different federal regulations)
 - ◆ Nameplate of less than 500 brake horsepower
 - ◆ Existing spark ignition 2SLB or 4SLB and compression ignition RICE units

Proposed MACT – Subpart ZZZZ

- Existing units considered as of December 19, 2002
- Emission limits, testing, monitoring, recordkeeping and reporting requirements listed in regulation
- Proposed Final Date: 2/28/2004

Other Federal Regulations

- If burn landfill gas in any type of unit, possibly subject to:
 - ◆ 40 CFR WWW – Standards of Performance for Municipal Solid Waste Landfills

State Regulations

- Standard 3 – Waste Combustion and Reduction
 - ◆ Covers any source which burns a substance that is not a commercially available virgin fuel (ie. digester or landfill gas)
 - ◆ The fuel cell, RICE or microturbines would be considered Industrial Incinerators
 - ◆ New regulation revision may include exemptions from the regulation in certain cases
 - ◆ PM and Opacity limitations for Industrial Incinerators

State Regulations

- Standard 4 – Emissions from Process Industries (Sections VIII and IX)
 - ◆ For all sources which do not have particulate matter (PM) or Opacity limitations elsewhere (most of units discussed today)
 - ◆ PM emission limit based on a process weight rate (Equation in Regulation)
 - ◆ Opacity limit based on construction/modification date

State Regulations

- The following regulations also must be complied with. Most facilities complete air dispersion modeling to show compliance
 - ◆ Standard 2 – Ambient Air Quality
 - ◆ Standard 7 – Prevention of Significant Deterioration (Class II Impact)
 - ◆ Standard 8 – Toxic Air Pollutants

Types of Permits

- Construction permit
- State operating permit
- Title V operating permit
- Conditional major operating permit

Construction Permit

- “Any person who plans to construct, alter or add to a source of air pollutants, including installation of control devices, shall first obtain a construction permit.”
 - ◆ SC Regulation 62.1, Section II, Part A (1)(a).
- The Bureau may exempt certain activities from permitting based on type and quantity of emissions involved.
 - ◆ SC Regulation 62.1, Section II, Part A.

Exemption Requests

- List of standard exemptions are listed in SC Regulation 61-62.1, Section II, Part F.
- All exemptions must be approved by the Bureau.
- Requests should be sent to the Director of Engineering Services.
- Emergency generators that are used as peak shaving units will not be exempted.

State Operating Permit

- Written request from facility 15 days prior to putting new construction into operation.
- District personnel will inspect source to ensure compliance with construction permit and regulations.
- State operating permit is issued for the entire facility and must be renewed every five years.
- SC Regulation 62.1, Section II, Part B.

Title V Permit

- Clean Air Act Amendments of 1990 Federal Operating Permit System
- All permits must go through EPA review and public comment
- All major facilities are required to obtain permit unless considered conditional major
- 95% of initial Title V permits issued
- SC Regulation 62.70
- Most major sources may request to use federally enforceable permit conditions and/or regulation to limit the source's potential to emit.

Title V – Definition of Major

- A major facility for Title V has the potential to emit (PTE) one of the following:
 - ◆ > 100 TPY of any criteria pollutant (VOC, SO₂, NO_x, CO, PM-10)
 - ◆ > 10 TPY of any single hazardous air pollutant (HAP)
 - ◆ > 25 TPY of a combination of all HAP at the facility
- PTE is calculated uncontrolled and 8760 hours a year

Conditional Major Permit

- Any major source may request to use federally enforceable permit conditions and/or regulation to limit the source's potential to emit.
- Permit must contain record keeping and reporting to ensure the facility limits their PTE.
- Permit must go through public comment.
- If conditional major status is denied, the facility must submit a complete Title V application.

Permitting Process - Submittal

- A facility (or consultant) submits an application to the Bureau which should include the following:
 - ◆ Part I form (general information) with a professional engineer and company official signature
 - ◆ Part II forms (source specific information)
 - ◆ Title V application, if appropriate
 - ◆ Brief description of project
 - ◆ Drawing of site (including building dimensions and stack heights)
 - ◆ Modeling questionnaires
 - ◆ Air dispersion Modeling

Permitting Process - Log in

- The submittal is logged into a permit tracking system which will keep a record of all work regarding the permit including the amount of time necessary to process the permit.
- For construction, synthetic minor, conditional major and state operating permits, the Bureau has 90 days to process the submittal.
- For Title V - 18 months

Permitting Process - Review

- The permit engineer receives the submittal and does a completeness check for required information.
- The submittal is sent to modeling which verifies compliance with Standard 2, 7, and 8.
- The permit engineer completes a technical review of the submittal and writes an engineering greensheet discussing decisions made, regulations triggered, and other special items.

Permitting Process - Issuance

- The permit engineer prepares a draft permit and submits it to the section manager.
- For some types of permits, the public comment period and EPA review, etc. is done at this stage.
- After approval, the draft permit is printed in the final form and signed by the Division Director.
- The permit is issued and mailed to the company.

Permit Timelines

What can you do to help minimize the processing time for your applications and requests?

Exemption Requests – No set timeframe

Construction Permit - 90 days

Operating Permits – 90 days

Title V – 180 days

Construction Permits

- Be sure the application is signed and stamped by a SC Registered PE
- Complete process description/flow diagram
- Emission Calculations & Equations
- Regulatory Review – Discuss all regulation applicability
- Modeling (Standards 2, 7, & 8)

Emission Calculations and Equations

- Potential to emit for change and any other related emissions
- Before and after control emission rates
- Lb/hr and TPY values
- Basis for emissions

Most Common Issues

- Modeling not done correctly
- No emission basis or else incomplete
- Permit requires public notice
- Potential to emit is not calculated appropriately
- Emission calculations not submitted for exemption requests

Questions on Permitting/ Regulatory Issues

- Robbie Brown at (803) 898-4105 or brownrj@dhec.sc.gov
- Joe Eller at (803) 898-3831 or ellerjc@dhec.sc.gov
- Or contact me at zakdl@yahoo.com

Who to ask in BAQ????

- Modeling: Kevin Clark 803-898-4074
- Emission Inventory: Bob Betterton 803-898-4292
- Enforcement: Keith Frost 803-898-4115
- Recordkeeping/Reporting: Jake Frick 803-898-3897
- When in doubt: the BAQ Switchboard (803)898-4123